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Rocky Mountain
Remediation Services, L L C
protecting the environment

Rocky Flats Environmental Technology Site
P O Box 464
Golden Colorado 80402-0464
Phone (303) 966-2677
Fax (303) 966-8244

September 18, 1996

96-RM-TA-0174-KH

Randy Leitner
Compliance & Performance Assurance
Kaiser-Hill Company L L C

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CLOSURE PLAN FOR BUILDING 776 FLUID BED INCINERATOR (FBI) UNIT OIL STORAGE RASCHIG RING TANKS T-1 AND T-2 - GRK-251-96

Action Transmit RCRA Closure Plan

Rocky Mountain Remediation Services, L L C , is submitting the attached RCRA Closure Plan for the FBI oil storage raschig ring tanks T-1 and T-2 in Building 776 at the Rocky Flats Environmental Technology Site

Also attached are draft transmittal letters to DOE, RFFO and CDPHE We request that the attached closure plans be submitted to DOE, RFFO at your earliest convenience Please note that there is a regulatory requirement to complete these closures within 180 days of approval We recommend that the closure activities in these plans be integrated with the Rocky Flats Cleanup Agreement and the Integrated Sitewide Baseline

If you have any questions, please contact Natalie VanTyne at extension 5893

Gary R Konwinski, Manager
Performance Assurance

Attachment
As Stated (2)

cc
K North - Kaiser-Hill
J K Wrapp - Kaiser-Hill
C C Jierree - RMRS
V L Orozco - RMRS
M T Stanley - LATA
RMRS Records Center, Building 080
File

Y 11

B776-A-000051 ADMIN RECORD

DRAFT **DRAFT** **DRAFT**

September XX, 1996

96-RF-XXXXX

Steven Tower, Director
Environmental Assessment Group
Rocky Flats Field Office
U S Department of Energy

Attn Dave Grosek

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CLOSURE PLAN FOR BUILDING 776 FLUID BED INCINERATOR (FBI) UNIT OIL STORAGE RASCHIG RING TANKS T-1 AND T-2 - RML-XXX-96

Kaiser-Hill Company, L L C , is submitting the attached RCRA Closure Plan for the FBI oil storage raschig ring tanks T-1 and T-2 in Building 776 at the Rocky Flats Environmental Technology Site

Also attached is a draft transmittal letter to the Colorado Department of Public Health and Environment (CDPHE) Please transmit this closure plan to CDPHE as soon as possible Please note that there is a regulatory requirement to complete these closures within 180 days of approval We recommend that the closure activities in these plans be integrated with the Rocky Flats Cleanup Agreement and the Integrated Sitewide Baseline

If you have any questions, please call me at extension 3537

Randy M Leitner, Program Manager
Compliance and Performance Assurance

Attachments
As Stated

Original and 1 cc
Steven Tower

cc w/Attachments
D Maxwell - DOE, RFFO
K North - Kaiser-Hill
N C VanTyne - RMRS

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DRAFT **DRAFT** **DRAFT**

Mr Joe Schieffelin, Unit Leader
Hazardous Waste Monitoring and Enforcement
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Dear Mr Schiefflin

The United States Department of Energy, Rocky Flats Field Office (DOE, RFFO) is submitting the attached RCRA Closure Plan for the FBI oil storage raschig ring tanks T-1 and T-2 in Building 776 at the Rocky Flats Environmental Technology Site

In addition, this correspondence also provides the required forty-five day notification per guidelines provided in the Colorado Hazardous Waste Regulations 6 CCR 1007-3, Part 265 112(d) prior to commencing closure We request this plan be approved by your office at your earliest convenience

If you have any questions, please contact David Maxwell, of my staff, at 966-4017

Sincerely,

Bob April, Director
Environmental Liaison Division

Enclosure
As Stated

cc w/enclosure

C	Gilbreath	-	CDPHE
D	Maxwell	-	DOE, RFFO
D	Grosek	-	DOE, RFFO
R M	Leitner	-	Kaiser-Hill
M	Stanley	-	LATA
N C	VanTyne	-	RMRS

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Attachment 3
96-RM-TA-0174-KH

KAISER•HILL
COMPANY

RMRS Rocky Mountain
Remediation Services, L.L.C
protecting the environment

RCRA CLOSURE PLAN FOR BUILDING 776 FBI UNIT OIL STORAGE RASCHIG RING TANKS T-1 AND T-2

September 1996

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Closure Plan for Building 776 Fluid Bed Incinerator (FBI) Unit Raschig Ring Tanks T-1 and T-2

1.0 Introduction

1.1 Purpose

This closure plan identifies a tank system associated with the Building 776 FBI tanks that is to undergo Resource Conservation and Recovery Act (RCRA) closure at the Rocky Flats Environmental Technology Site (RFETS) This process constitutes partial closure of the RFETS facility This plan addresses RCRA closure of oil storage raschig ring tanks T-1 and T-2 and ancillary equipment

1.2 Regulatory Requirements

This closure plan is being submitted in accordance with Section 265 112 (d) (1) of the Code of Colorado Regulations (6 CCR), which requires that facilities intending to close interim status units submit a plan detailing the closure activities at least 45 days prior to commencing closure This plan addresses specific closure requirements contained in 6 CCR, Part 265, Subpart G - Closure and Post-closure, and Subpart J - Tanks

Although there is a regulatory requirement to demonstrate financial responsibility, this is a government owned facility Demonstration of financial responsibility is not required for government-owned facilities, pursuant to 6 CCR, Section 266 10 (c)

1.3 Facility History

Rocky Flats Environmental Technology Site is owned and operated by the U S Department of Energy (DOE) and is co-operated by Kaiser-Hill Company, L L C The original mission of the site was production of metal components for nuclear weapons In support of this mission, Building 776 was used as a plutonium foundry It subsequently housed waste reduction facilities, a coatings laboratory, and a preventative maintenance shop

Currently, Building 776 is being primarily utilized for hazardous waste storage The building safety envelope is being maintained and the routine surveillance and inspections are being conducted

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1.4 Facility Contact

The RFETS contact for closure activities is

Manager, Rocky Flats Field Office
U S Department of Energy
P O Box 928
Golden, Colorado 80402-0928
Phone (303) 966-2025

2.0 Unit Description

The FBI incinerator unit is located within Building 776 in Room 118 Liquid waste was transferred to the unit either directly from drums or from two feed tanks The feed tanks are known as Tanks T-1 and T-2, which are designated as RCRA Units 44 01 and 44 02, respectively A process flow diagram of these RCRA Units is shown in Figure 1

Tanks T-1 and T-2 have capacities of 400 and 350 gallons, respectively Both tanks are raschig ring filled and were utilized to store mixed waste oils as feed stock for the FBI These tanks have been emptied, but still contain residual liquids and raschig rings Ancillary equipment associated with this system includes pumps, valves, and piping

3.0 Closure Performance Standard

The closure performance standard specifies that hazardous waste facilities are to be closed in a manner that minimizes the need for further maintenance at the facility and protects human health and the environment by controlling, minimizing, or eliminating potential releases of hazardous waste to the environment (6 CCR, Section 265 111) Specific closure performance standards for each of the components of this system are defined as follows

The FBI tanks and ancillary equipment have no future use and therefore will be stripped out and managed as hazardous debris Based on discussions with building personnel, the following constituents are expected to be found in the FBI system 1,1,1-trichloroethane (F001), carbon tetrachloride, methylene chloride, tetrachloroethylene, and trichloroethylene (F002), acetone, xylene, ethyl benzene (F003), benzene and toluene (F005) The tanks will be rinsed with an appropriate solution for decontamination of removable oils and sludge Guidelines for appropriate decontamination solutions can be found in the decontamination section of the Rocky Flats Part B Permit

The closure performance standard proposed for the tanks is to clean the surfaces that contacted

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RCRA-listed hazardous wastes to a clean surface debris standard using approved debris rule treatment alternatives and extraction technologies as defined in 6 CCR, Part 268 45, footnote 3 to Table 1

> "The surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present providing that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5 percent of each square inch of surface area"

Debris that is treated by an extraction or destruction technology as specified in 6 CCR, Part 268 45 not exhibiting the characteristic of hazardous waste, will be managed as non-hazardous debris in accordance with 6 CCR, Part 268 45 (c)

Additionally, the clean closure standard as discussed in the Rocky Flats Part B Permit will be utilized as a closure standard for the equipment to be left in place as well as the floors and secondary containment structures If the final rinsate indicates that the standard has been achieved the items closed under this standard will be considered clean closed If the standards are not initially achieved, additional washing and rinsing will be conducted If washing and rinsing demonstrate that clean closure is not feasible, the equipment will be removed and managed as hazardous waste

Some portions of the system may be stripped out with no cleaning In this case, the equipment will be stripped out, characterized, and appropriately managed as hazardous waste

4.0 Closure Activities

The following sections provide specific information concerning the activities that will govern the RCRA closure of the tanks and ancillary equipment If, at any time, closure of these systems becomes technically impractical or unsafe, any portion or all of the tank system may be stripped out, characterized, and managed appropriately

4.1 Preparation of Work Controls

Work controls governing the closure activities will be prepared prior to initiating closure of this system An engineering progression that logically closes the system will be developed for the tanks and ancillary equipment The work controls will address health and safety requirements, preparation of radiological containment systems, personal protective equipment (PPE) needs, and waste packaging requirements

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4.2 System Closure Activities

4.2.1 Closure Performance Standard for the Raschig Ring Tanks T-1 and T-2

The feed tanks for the FBI production unit, tanks T-1 and T-2, and ancillary equipment will be washed and rinsed with a decontamination solution for oils and solvents that is known to clean the organic solutions that were in the tanks 1,1,1-trichloroethane (F001), carbon tetrachloride, methylene chloride, tetrachloroethylene, and trichloroethylene (F002), acetone, xylene, ethyl benzene (F003), benzene and toluene (F005) Following the washing process the tanks and the ancillary equipment, consisting of pumps, tubing, and valves will be dismantled The raschig ring tanks will be contained within the existing temporary enclosure, and cut into manageable lengths, and visually inspected to determine if the clean debris standard has been achieved If the standard is achieved, the raschig-ring tanks will be managed as low-level waste Failure to meet the clean debris standard will result in the raschig ring tanks being managed as low-level mixed waste

The ancillary equipment associated with the raschig ring tanks will be difficult if not impossible to visually inspect to verify the clean debris standard Following strip out of the ancillary equipment, the majority of it will be managed as low-level mixed waste

If the visual inspection or cleaning process of the raschig ring tanks or ancillary equipment becomes technically infeasible or unsafe due to radiological concerns, the equipment will be managed as mixed waste

4.2.2 Closure of Adjacent Floors and Secondary Containment

The secondary containment and floor surrounding the raschig ring tanks and the associated ancillary equipment will be washed, rinsed, and sampled for compliance with the closure performance standard in Section 3 0 of this plan Waste liquids associated with this process will be transferred to Building 374 for treatment

4.3 Characterization and Disposition of Wastes Generated During Closure

Wastes to be generated during closure will consist of liquids, minimal sludge, metal, PPE, as well as wipes, plastic, and adhesives associated with the containment structure The amount of hazardous waste that is produced will be minimal and consist of pumps, pipes, valves, sludges, plastic, and wipes Any newly generated hazardous wastes produced will be stored in RCRA permitted storage units pending final treatment or disposal Liquids and soluble materials flushed from the systems during the washing and rinsing cycles will be transferred to Building 374 for treatment Non-soluble sludge will be characterized and managed appropriately as low-level mixed wastes Metal components are expected to be non-hazardous and therefore will be either managed as non-hazardous low-level waste or recycled

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5.0 Waste Generation Rates

5.1 Estimated Liquid Waste

The estimated amount of liquid waste to be generated from the wash and rinse of the oil-filled raschig ring tanks and ancillary equipment will be limited Sufficient wash and rinse cycles will be utilized until the appropriate closure standards have been met The amount of liquid waste estimated to be generated from this closure activity is less than 3,000 gallons

5.2 Estimated Solid Waste

Solid waste generation will be directly related to the amount of equipment that is removed The FBI systems were utilized to incinerate oils and organic solvents that contained radioactive materials The majority of the solid waste is expected to be low-level radioactive waste Approximately 1 ton of low-level waste metal is expected to be generated Additionally, there will be solid waste in the form of non-soluble sludge and combustibles such as wipes, PPE, and plastic It is estimated that approximately six 55-gallon drums of these low-level mixed waste materials will be produced

6.0 Certification of Closure

Within 60 days after completion of closure, the site will submit to the Colorado Department of Public Health and Environment certification that the tanks, piping, ancillary equipment, and secondary containment have been closed in accordance with the approved closure plan The certification will be signed by the owner, or operator of the facility and by an independent, Colorado-registered professional engineer

7.0 Criteria for Determining Post-Closure Care

The soils and ground water under Building 776 are discussed in the Historical Release Report, and may be contaminated Additionally, below grade piping and transfer lines will not be entirely decontaminated Consistent with the Rocky Flats Cleanup Agreement, below grade and in-floor portions of the FBI system will be deferred until building decommissioning commences

8.0 Record Keeping

The site will maintain the following closure records at the facility during closure activities until final closure of the facility

a) Record of sampling activities (date, number, and type)

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b) Analytical results
c) Records of actions taken to decontaminate equipment or structures
d) Work control packages governing the closure of this RCRA system
e) Other documentation which verifies that the Site followed the approved closure plan

9.0 Amendment of Closure Plan

In conducting closure, unexpected events that occur during the implementation of required closure activities may require an amendment of the existing closure plan Any request for the modification of the closure plan will be made within 30 days of identification of the event that causes amendment to be necessary

10.0 Closure Schedule

The closure of the Building 776 FBI system is expected to commence upon approval of this closure plan, subject to regulatory requirements to complete these closures within 180 days of approval It is recommended that the closure activities in this plan be integrated with RFCA and the Integrated Site Wide Baseline

T-1, T-2
OIL STORAGE TANKS

NOTES

1) THIS SIMPLIFIED SCHEMATIC IS NOT AN AS-BUILT REPRESENTAION OF THE SYSTEM

2) EQUIPMENT AND MATERIAL SHOWN IN ARROW BOXES ARE NOT CONSIDERED PART OF THE REGULATED UNIT

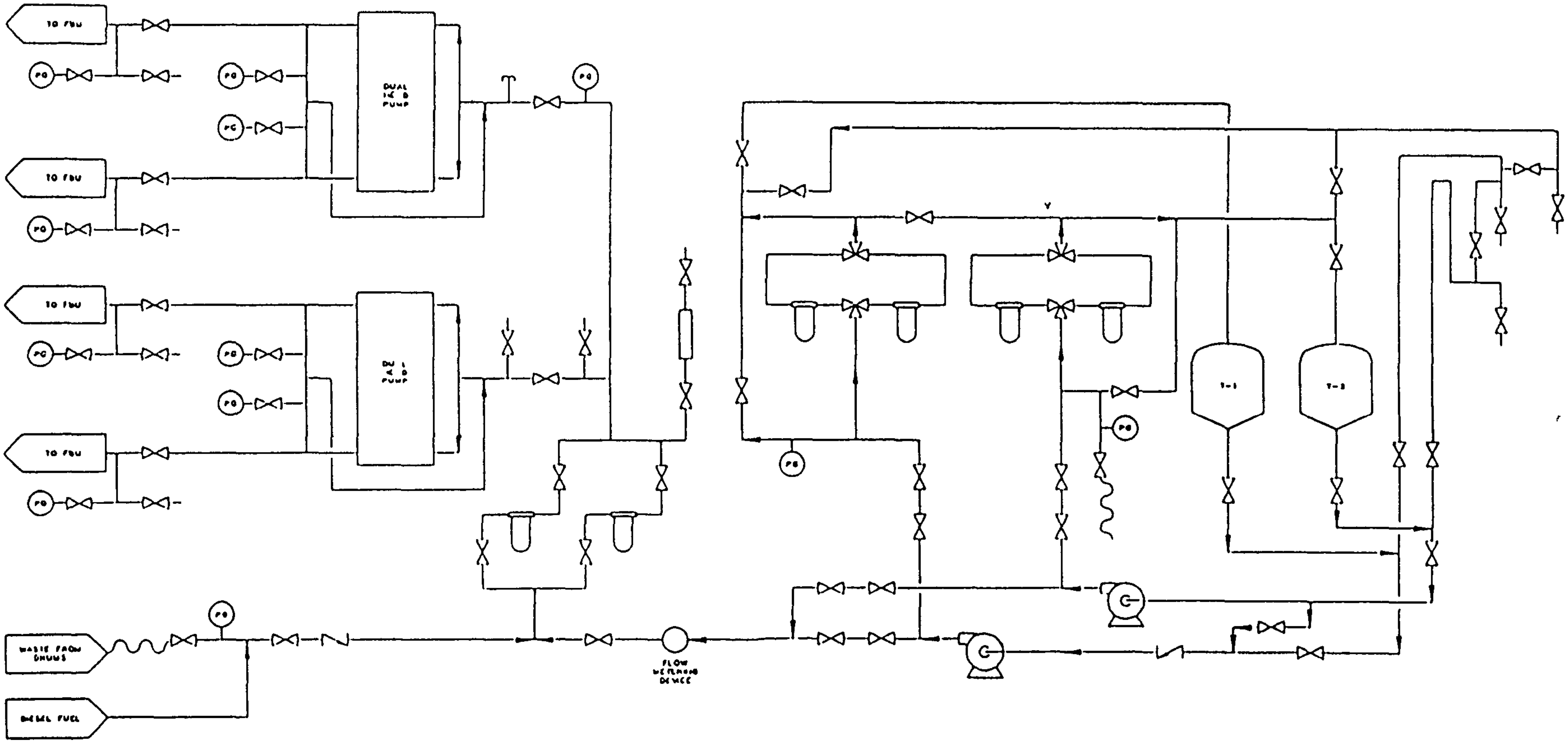

Figure 1

KEYWORDS	
1. RCRA	
2. CLOSURE	
3. PLAN	
4. P&ID	
5.	
BLDG./FACILITY	776
ROOM/AREA	134
GRID COOR./COL. NO.	
MASTER	YES ☐ NO ☒

ISSUE	DESCRIPTION	DATE					DOC	CLASS	JOB NO.
A	ORIGINAL ISSUE	XX/XX/93							

DESIGNED	WEAVER	XX/XX/93
DRAWN	LEMKE	XX/XX/93
CHECKED	KELLER	XX/XX/93
APPROVED	McMANUS	XX/XX/93
	BERBAUM	XX/XX/93

SCALE: AS NOTED

U.S. DEPARTMENT OF ENERGY
ROCKY FLATS AREA OFFICE GOLDEN, COLORADO

Rocky Flats Plant

GOLDEN, COLORADO 80401

RCRA CLOSURE PLAN

OIL STORAGE TANKS
UNITS 44 01, 44 02

SIZE	DRAWING NUMBER	ISSUE	SHEET
B	39650-3080	A	OF

COMPUTER-GENERATED NO MANUAL CHANGES ALLOWED